Strategic Prioritization Process Annual Report

December 1, 2016

EXECUTIVE SUMMARY

In accordance with the Strategic Transportation Investment (STI) law, *"Beginning December 1, 2016, the Department shall report annually to the Joint Legislative Transportation Oversight Committee on any changes made to the highway or non-highway prioritization process and the resulting impact to the State Transportation Improvement Program"* (G.S. 136-189.11(h)). This report provides an update on the implementation of the Department's Strategic Prioritization Process in accordance with the STI law for the period of 2014-2016. This is the first such report and covers the results of the first implementation of the Strategic Prioritization Process in accordance with the STI law in 2014, as well as changes made with the implementation of the second cycle in 2015 and 2016.

The Strategic Transportation Investments law was passed in June 2013. This landmark legislation fundamentally changed how capital transportation projects were selected and funded in North Carolina. Projects are selected based on a systematic evaluation and ranking, using a combination of data and local priorities. Funding is applied to projects with the highest scores.

Prioritization 3.0, also known as P3.0, was the third generation of the Department's Strategic Prioritization Process for evaluating and ranking projects using a systematic, data-driven approach in conjunction with local input. P3.0, implemented in 2013-2014, was the first cycle of the prioritization process that was executed following the passage of the STI legislation. During P3.0, the Department evaluated nearly 3,000 projects across all six modes, totaling $70 billion. Of these projects, approximately 650 were funded in the 2016-2025 STIP with an estimated total cost of nearly $16 billion (these numbers account for additional revenue from the Appropriations Act of 2015).

Building off the success of P3.0, the Department developed P4.0 in 2014-2015. As in P3.0, the Department employed "*the use of a workgroup process to develop improvements to the prioritization process*." Changes were made to "*continually improve the methodology and criteria used to score highway and non-highway projects pursuant to* [the STI law], *including the use of normalization techniques, and methods to strengthen the data collection process"* (G.S. 136-189.11(h)). As part of the P4.0 update, the Department hired Cambridge Systematics consulting firm to provide an independent review and statistical analysis of the scoring and data used in P3.0. Overall, Cambridge indicated that P3.0 represents a mature prioritization process that reflects numerous best practices and is viewed nationally as one of the most comprehensive State DOT prioritization processes. To continually improve the prioritization process, Cambridge recommended both global improvements (across all 6 modes) and mode-specific improvements.

The P4.0 Workgroup met 17 times over a 12 month period and made recommendations to enhance the scoring process, many of which were suggested by Cambridge. The Workgroup recommended the following changes for P4.0:

Global Changes

- Scale all criteria on a relative basis within each mode to provide a better distribution of scores
- Continue to use Normalization approach from P3.0

Highway Scoring Changes

- Incorporate the use of Peak Average Daily Traffic to account for seasonal traffic volumes
- Provide additional points to areas that contribute local dollars or tolls towards the project costs
- Include safety benefits when calculating the overall benefits of a project
- Incorporate the Department's new Statewide Travel Demand Model for generating travel time savings
- Update the Economic Competitiveness criteria to analyze the project's economic impact at the county level
- Enhance the Accessibility/Connectivity criteria to improve access to opportunity in rural and less affluent areas and improve interconnectivity of the transportation network
- Split the previously combined Multimodal and Freight criteria into two separate criteria and include measures that evaluate the proximity of the project to the nearest transportation terminal

Non-Highway Mode Scoring Changes

- Combine Aviation criteria of Local and Federal contribution into single criteria measuring all non-state contribution
- New Aviation criteria measuring the benefit of flight operations and economic data compared to the project cost
- Update the definition of eligible Aviation projects to only consider projects that exceed the system objectives or regulatory requirements for the airport's infrastructure
- New Bicycle and Pedestrian criteria focusing on bicycle/pedestrian network connectivity
- Revised all Public Transportation criteria and weights for vehicle and facility project types, to improve scoring process and allow for higher quality of project data (fixed guideway criteria were not revised)
- Revised all Rail criteria and weights, to improve scoring process and efficiency
- Revised and simplified all Rail project types

Other Changes

- Define committed projects as those funded for right-of-way or construction in the first five years of the STIP (projects funded in the last five years are subject to rescoring in P4.0)
- Use similar approaches as those used in P3.0 in determining the number of project submittals and local input points

All Workgroup recommendations were approved by the Board of Transportation for P4.0 on July 9, 2015.

In P4.0, which was implemented in 2015-2016, the Department evaluated nearly 2,000 projects across all six modes, totaling $57 billion. At the time of writing of this report, the Draft 2018-2027 STIP is currently being developed, therefore the number of funded projects is currently not known. The Department anticipates updating this document by March 31, 2017 with the full results from P4.0 and the subsequent impact to 2018-2027 Draft STIP.

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INTRODUCTION

In accordance with the Strategic Transportation Investment (STI) law, *"Beginning December 1, 2016, the Department shall report annually to the Joint Legislative Transportation Oversight Committee on any changes made to the highway or non-highway prioritization process and the resulting impact to the State Transportation Improvement Program"* (G.S. 136-189.11(h)). This report provides an update on the implementation of the Department's Strategic Prioritization Process in accordance with the STI law for the period of 2014-2016. This is the first such report and covers the results of the first implementation of the Strategic Prioritization Process in accordance with the STI law in 2014, as well as changes made with the implementation of the second cycle in 2015 and 2016.

The Strategic Transportation Investments law was passed in June 2013. This landmark legislation fundamentally changed how capital transportation projects were selected and funded in North Carolina. Projects are selected based on a systematic evaluation and ranking using a combination of data and local priorities. Funding is applied to projects with the highest scores.

Prior to the enactment of the STI law, funding was distributed to NCDOT's 14 Transportation Divisions using a geographic equity law. Funding for each Division was based on a combination of population (50%), equal share (25%), and miles to complete the state's former intrastate system (25%), which was a system of approximately 3600 miles of four-lane or greater highways within 10 miles of 90% of the state's population. The results of the Strategic Prioritization Process were used to guide project selection, but did not always result in the funding of highest scoring projects due to funding availability. In addition, projects were not required to be funded based on the prioritization score.

Prioritization 3.0, also known as P3.0, was the third generation of the Department's Strategic Prioritization Process for evaluating and ranking projects using a systematic, data-driven approach in conjunction with local input. P3.0, implemented in 2013-2014, was the first cycle of the prioritization process that was executed following the passage of the STI legislation. Prioritization 4.0 (P4.0), was implemented two years later in 2015-2016, building off of the success of P3.0. Changes were made to "*continually improve the methodology and criteria used to score highway and non-highway projects pursuant to* [the STI law], *including the use of normalization techniques, and methods to strengthen the data collection process"* (G.S. 136-189.11(h)). This report describes the results of STI under P3.0, changes made to P4.0, and the expected results. The initial development of STI under P3.0, submitted on December 31, 2013, can be found on the Joint Legislative Transportation Oversight Committee (JLTOC) website at *http://www.ncleg.net/documentsites/committees/JLTOC/2013-14_Biennium/2.7.14_Meeting/STI%20Implementation%20Final%20Report%20123113.pdf.*

The STI law officially established the use of a Prioritization Workgroup process to provide recommendations to the Department on the scoring of capital projects subject to STI. This includes recommendations on the criteria and measures used to evaluate projects, the weights associated with each criteria, and the process submitting and evaluating projects, including the use of local input points. Local input points are most often used to indicate a local area's priority for transportation projects. G.S. 136-189.11(h) officially lists Workgroup participants.

PRIORITIZATION 3.0 IMPLEMENTATION

Metropolitan Planning Organizations (MPOs), Rural Planning Organizations (RPOs), and NCDOT Divisions submitted candidate projects for P3.0 for all six modes (Aviation, Bicycle & Pedestrian, Ferry, Highway, Public Transportation, and Rail) during the period of January 27th through March 3rd, 2014, using the Department's newly created SPOT On!ine tool. This tool, developed by NCDOT in partnership with ESRI, captures user-entered project information and derives data from Geographic Information Systems (GIS) to score projects. Users were provided preliminary scores for highway and bicycle/pedestrian projects after each project was submitted. Following the submittal of projects, the Prioritization Office, in coordination with several other business units, reviewed and updated the data associated with each project to ensure it was as accurate as possible. Project submitters (MPOs, RPOs, and Divisions) had an opportunity to review all data as well. Once the data was considered accurate, scores were updated as needed. All projects were scored using the criteria and weights approved by the Board of Transportation (BOT) in November 2013 (see Appendix A). The quantitative scores for all projects and the top-scoring projects that were funded in the Statewide Mobility category were released on May 14, 2014 in user-friendly spreadsheets.

In P3.0, each MPO, RPO, and Division had a single 90 day period to assign their Regional Impact and Division Needs local input points to eligible projects. Each entity was to assign these points based on their approved local input point methodology. MPOs and RPOs are required by statute (GS 136-18.42) to have an NCDOT-approved process for assigning local input points. The NCDOT Division Engineers have a formal process as well. This 90 day period provided ample opportunity for each entity to receive public input, following their approved methodology on the assignment of local input points. Once points were finalized and approved by their board (for MPOs and RPOs), each entity submitted the points assigned to each project in SPOT On!ine. Following the closure of the local input point window, the Prioritization Office calculated the total scores for each project. These final scores were released on September 24, 2014.

During the months of September, October, and November 2014, the Department's TIP Unit developed the Draft STIP using the prioritization results as the primary input. Other factors considered were:

- Normalization approach for allocating funds between highway and non-highway projects
- Funds allocated to transition projects (projects let between October 1, 2013 and July 1, 2015, per the STI law)
- Provisions in the STI law such as corridor caps and caps affecting non-highway projects
- Project delivery time
- Funding availability for each STI category

PRIORITIZATION 3.0 RESULTS

The first Draft STIP based on STI was released on December 4, 2014. Following public comment meetings, the Final 2016-2025 STIP was approved by the BOT on June 4, 2015. In September 2015, the 2015 Current Operations and Capital Improvements Appropriations Act of 2015 (Session Law 2015-241, House Bill 97) was passed by the Legislature and signed by the Governor, providing an additional $1.7 billion dollars over the 2016-2025 period. Due to the significant increase in revenue, the STIP was amended in January 2016 by the BOT to account for the acceleration of many projects as well as the addition of numerous projects to the 10 year program.

A total of nearly 3,000 projects at a cost to NCDOT of almost $70 billion were evaluated in P3.0. The breakdown by mode is shown below in Figure 1.

Figure 1: P3.0 Projects Evaluated by Mode with 2016-2025 STIP Programmed Amounts

Mode	Total Projects Evaluated	Cost to NCDOT ($million)	Total Projects Programmed in 2016-2025 STIP*	Amount Programmed in 2016-2025* ($million)
Highway	1,731	$66,288	511	$15,237
Aviation	495	$731	36	$280
Bicycle & Pedestrian	461	$409	80	$80
Ferry	16	$131	1	$12
Public Transportation	221	$471	7	$22
Rail	32	$1,110	6	$34
Total	**2,956**	**$69,140**	**641**	**$15,665**

*Based on the amended STIP in January 2016

Note that in the table above, the numbers of projects are based on those individually evaluated in P3.0. In developing the STIP, some of the funded projects were combined into a single project.

PRIORITIZATION 4.0 WORKGROUP PROCESS

The prioritization process typically occurs every two years. Prioritization 4.0 officially kicked off on September 22, 2014 with the first meeting of the P4.0 Workgroup. See Appendix B for a listing of P4.0 Workgroup members. The Workgroup met 17 times between September 2014 and August 2015, discussing many topics, while reaching consensus on over 100 items with no votes taken. See Appendix C for a full listing of the items for which consensus was reached.

As part of the update of the prioritization process for P4.0, the Department hired Cambridge Systematics to conduct an independent, statistical analysis of the scoring and data used in P3.0. The objective of this assessment was to:

- Review the results, criteria, and methodologies from P3.0 (the assignment of local input points was not included)
- Identify strengths and weaknesses of the process
- Recommend enhancements for implementation in P4.0 and beyond

Overall, Cambridge indicated that P3.0 represented a mature prioritization process that reflected numerous best practices and is viewed nationally as one of the most comprehensive State DOT prioritization processes. To continually improve the prioritization process, Cambridge recommended both global improvements (across all 6 modes) and mode-specific improvements. For more details on the Cambridge Analysis and Recommendations, please visit *http://www.ncleg.net/documentsites/committees/JointAppropriationsTransportation/2015_Session/3.05.15/2.Cambridge_Report_FINAL.PDF*

Cambridge presented their findings and recommendations to the Workgroup at several meetings. The Workgroup considered the recommendations as they updated the scoring for P4.0. Ultimately, the Workgroup recommended the following changes:

Global Scoring Changes (applies to all 6 modes)

Scale all criteria on a relative basis within each mode – Cambridge noted that the biggest statistical issues with P3.0 were small ranges of values, groupings of low or high values, and criteria that had a disproportional impact on the total score. The main cause of these statistical issues was the use of inconsistent factoring approaches to reach 0-100 point values. The implementation of scaling would provide a better distribution of scores.

Continue to use Normalization approach from P3.0 – The Workgroup discussed at length the potential use of cross-modal scoring where the same criteria would be used to evaluate projects across all six modes. This included participating in a USDOT-sponsored Peer Exchange in December 2014 to see if other states have used such a process. The use of mode-specific criteria, while ideal, presents several significant challenges, including different purposes and benefits, and the availability of adequate data

for all six modes. Cambridge and the Workgroup recommended to continue allocating funds between Highway and Non-Highway projects in a transparent manner as in P3.0. Therefore, the following approach was used:

- **Statewide Mobility** – Available funds were allocated to the highest scoring eligible projects, regardless of mode (only certain highway, rail, and aviation projects are eligible in this category)
- **Regional Impact** – A minimum of 4% of available funds were allocated to the highest scoring eligible non-highway projects, a minimum of 90% of available funds were allocated to the highest scoring eligible highway projects, and the remaining 6% of available funds were allocated to the remaining highest scoring projects regardless of mode
- **Division Needs** – A minimum of 4% of available funds were allocated to the highest scoring eligible non-highway projects, a minimum of 90% of available funds were allocated to the highest scoring eligible highway projects, and the remaining 6% of available funds were allocated to the remaining highest scoring projects regardless of mode

Highway Scoring Changes

Peak ADT – The Workgroup recommended the use of Peak Average Daily Traffic (Peak ADT or PADT) instead of Average Annual Daily Traffic (AADT) in order to account for seasonal variations in traffic throughout the state. The Peak ADT volumes were based on the highest month of the year for each roadway. For example, the Peak ADT volumes for several roadways at the beach are from July, while the Peak volumes for several roads in the mountains are from October. Peak ADT was used in scoring formulas for Congestion, Freight, and Multimodal criteria where traffic volume was used.

Local Contribution and Safety Benefits – there was a concern following P3.0 that scores did not substantially change as a result of areas committing local funding or agreeing to tolls. To entice more areas to commit local funds or tolls to projects, the Workgroup recommended to revise the Benefit/Cost calculation as follows:

$$\left[\frac{\text{Project Benefits}}{\text{Project Cost to NCDOT}}\right] + \left[\frac{\text{Other Funds}}{\text{Total Project Cost}} \times 100\right]$$

The Project Benefits are based on the expected travel time savings and the safety benefits resulting from the project over a 10 year period (previously the time period was 25 years in P3.0). New to P4.0, the Workgroup included safety benefits of projects to better account for the expected safety impacts of the proposed improvement. The safety benefits allowed modernization and similar projects to receive a Benefit/Cost score, even if there was no expected travel time savings associated with the project (in P3.0 these projects received a zero for the Benefit/Cost criteria score). The Project Cost to NCDOT is the total cost of the project minus local funds or expected toll revenue (same as in P3.0). The second half of the equation is new to P4.0 and provides additional points for projects with local funds or tolls (local contribution).

Statewide Travel Demand Model (NCSTM) – NCDOT, working with a consultant, has been developing the North Carolina Statewide Travel Demand Model (NCSTM) for the past several years. This computer

model uses existing travel characteristics and existing and future land use to forecast traffic volumes on all of the primary highways throughout the state through the year 2040. The Workgroup discussed the use of NCSTM at several meetings and agreed to use it to generate travel time savings for eligible Statewide Mobility projects over a 10 year period.

Economic Competitiveness – The Workgroup continued to support the use of TREDIS in generating the two measures for the Economic Competitiveness criteria: the long-term jobs created, and the percent change in the local economy. However, they recommended two changes for P4.0: change the evaluation period to a 10 year period (from 25 years), and change the analysis region to the county (instead of the Division). The 10 year period matches the 10 year travel time savings results generated by the NCSTM, which is a primary input into TREDIS. By changing analysis regions to the county level, projects which are expected to generate a decent travel time savings will have a much greater impact on the economy in a less affluent area than one with a vibrant economy.

Accessibility/Connectivity – The Workgroup discussed enhancing the Accessibility/Connectivity criteria over several meetings. The first challenge was defining the purpose of the criteria, which after much discussion, they agreed to the following: improve access to opportunity in rural and less affluent areas, and improve interconnectivity of the transportation network. To evaluate projects based on this purpose, the Workgroup agreed to use the following two measures, each weighted at 50% of the Accessibility/Connectivity criteria score:

- **County Tier Designation** – Points are based on economic distress indicators from the Department of Commerce (included rankings: property tax base per capita, population growth, median household income, and unemployment rate)
- **Does project upgrade how the roadway functions?** – Points are based on whether the project upgrades the roadway to provide a higher level of mobility by enhancing traffic flow, eliminating/bypassing signalized sections, increasing control of access, and accounting for the travel time savings per user.

Multimodal & Freight – In P3.0, these two criteria were combined into a single criteria for project evaluation. In P4.0, the Workgroup recommended separating the two criteria (as listed in the STI law) in order to allow each criteria to focus on different characteristics of the projects.

- **Freight** – The purpose is to measure congestion along routes that provide connection to freight intermodal terminals and routes that have high truck volumes. The criteria is measured by truck volumes, whether the project is along a non-Interstate STRAHNET route or a designated future interstate route (new to P4.0), and the distance to the nearest freight intermodal terminal. Freight terminals were defined as:
    - Public freight intermodal terminals (truck/rail/pipeline)
    - Seaports and inland ports
    - Statewide Mobility eligible airports which handle large movement of freight
    - Major military bases
    - Major ferry terminals

- Large private freight intermodal terminals (truck to rail)

In P3.0, a project was required to directly to touch the property line of the terminal to receive points. In P4.0, the Workgroup recommended that projects could receive points as long as they were within 20 miles of the freight terminal, using a graduated point scale based on distance.

- **Multimodal** – The purpose is to measure congestion along routes that provide a connection to multimodal passenger terminals. The criteria is measured by the distance to the nearest multimodal passenger terminals and the congestion along the route. Multimodal passenger terminals were defined as:
  - Amtrak stations
  - Major transit terminals
  - Commercial service airports
  - Red & blue general aviation airports (as defined by Division of Aviation)
  - Major military bases
  - Ferry terminals (all)

  In P3.0, a project was required to directly to touch the property line of the terminal to receive points. In P4.0, the Workgroup recommended that projects could receive points as long as they were within 5 miles of the multimodal passenger terminal, using a graduated point scale based on distance.

Other Discussion – The Workgroup also discussed other potential changes, but ultimately decided not to incorporate into project scoring. This included the following:

- **Hurricane evacuation routes** – On several occasions, the Workgroup discussed awarding points for projects on hurricane evacuation routes. However, there were two challenges with incorporating this measure into scoring. First, this measure would only applicable for projects in eastern North Carolina. The Workgroup also considered inclusion of Nuclear Evacuation Routes, however this would result in nearly all roadways in the vicinity of a nuclear power plant as eligible. Second, in the STI law, evacuation routes is not an eligible criteria, so there was a challenge to decide which criteria this measure could fit within.
- **Route continuity** – The Workgroup discussed the use of route continuity for scoring projects. The purpose of this measure was to award points to projects that helped eliminate a lane imbalance along adjacent roadway sections, or project sections that completed new location facilities. However, similar to hurricane evacuation routes, there was a challenge to decide which criteria this measure could fit within.

Using the updated criteria and measures, the Workgroup recommended the criteria and weights for scoring highway projects in P4.0, as shown in Figure 3 on page 13, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

Aviation Scoring Changes

The Division of Aviation recommended replacements for two criteria as well as changes to most of the criteria weights. P3.0 heavily emphasized rating systems used by the Division of Aviation and the Federal Aviation Administration. These criteria continued to be used in P4.0, but with weighting more evenly distributed to other criteria. Two P3.0 criteria measuring local funds and federal funds were combined into a new criteria for P4.0 that emphasizes the combined effect of all non-state fund contributions. A new criteria was also added to measure the benefit of flight operations and economic data compared to the project cost.

The Division of Aviation also recommended a major change to the definition of eligible capital projects that would be eligible for evaluation in P4.0. P3.0 considered all projects that changed the 'footprint' of the airport's infrastructure. However, P4.0 considered only projects that exceed the system objectives or regulatory requirements for the airport's infrastructure.

Using the updated criteria and measures, the Workgroup recommended the criteria and weights for scoring aviation projects in P4.0, as shown in Figure 4 on page 15, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

Bicycle & Pedestrian Scoring Changes

Four identical criteria were carried forward from P3.0 to P4.0. These criteria measured the same data, while incorporating a new safety benefit, as well as a population factor for unoccupied housing units (second homes) and group housing, excluding prisons. P3.0 criteria measuring project readiness was removed, with its data instead being used as project detail informational inputs. P4.0 added a new Connectivity criteria focusing on bicycle/pedestrian network connectivity, measuring the project's degree of separation from a roadway, ADA compliance, and connectivity to similar or better project type.

Using the update criteria and measures, the Workgroup recommended the criteria and weights for scoring bicycle & pedestrian projects in P4.0, as shown in Figure 5 on page 16, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

Ferry Scoring Changes

P3.0 criteria underwent very little changes for P4.0, beyond renaming two criteria, tweaking a few data points, and slightly adjusting weights.

Using the updated criteria and measures, the Workgroup recommended the criteria and weights for scoring ferry projects in P4.0, as shown in Figure 6 on page 17, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

Public Transportation Scoring Changes

P3.0 criteria proved to be more complicated and difficult to accurately measure and score than anticipated. Weights also heavily favored certain criteria, therefore certain types of projects as well. In P4.0, the Public Transportation Division utilized a working group of stakeholders for initial discussion of changes and recommendations to take to the P4.0 Workgroup. The criteria and weights for vehicles and facilities were revised for P4.0, so that final criteria used simpler but more measurable data, and the weights were more evenly distributed across all criteria. Criteria and weights for fixed guideway were mostly unchanged.

Using the updated criteria and measures, the Workgroup recommended the criteria and weights for scoring public transportation projects in P4.0, as shown in Figure 7 on page 18, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

Rail Scoring Changes

P3.0 scoring was very complicated with 7 criteria, as well as 4 different project types that were each weighted differently within each criteria and each STI category. Some scoring formulas also resulted in criteria that had a disproportional impact compared to the intended weighs. P4.0 scoring was revised, reducing to 4 criteria and only 2 overarching project types. Weights were simplified and consolidated across project types.

Using the updated criteria and measures, the Workgroup recommended the criteria and weights for scoring rail projects in P4.0, as shown in Figure 8 on page 21, which changed from P3.0. The table includes the P3.0 measures and weights for comparison.

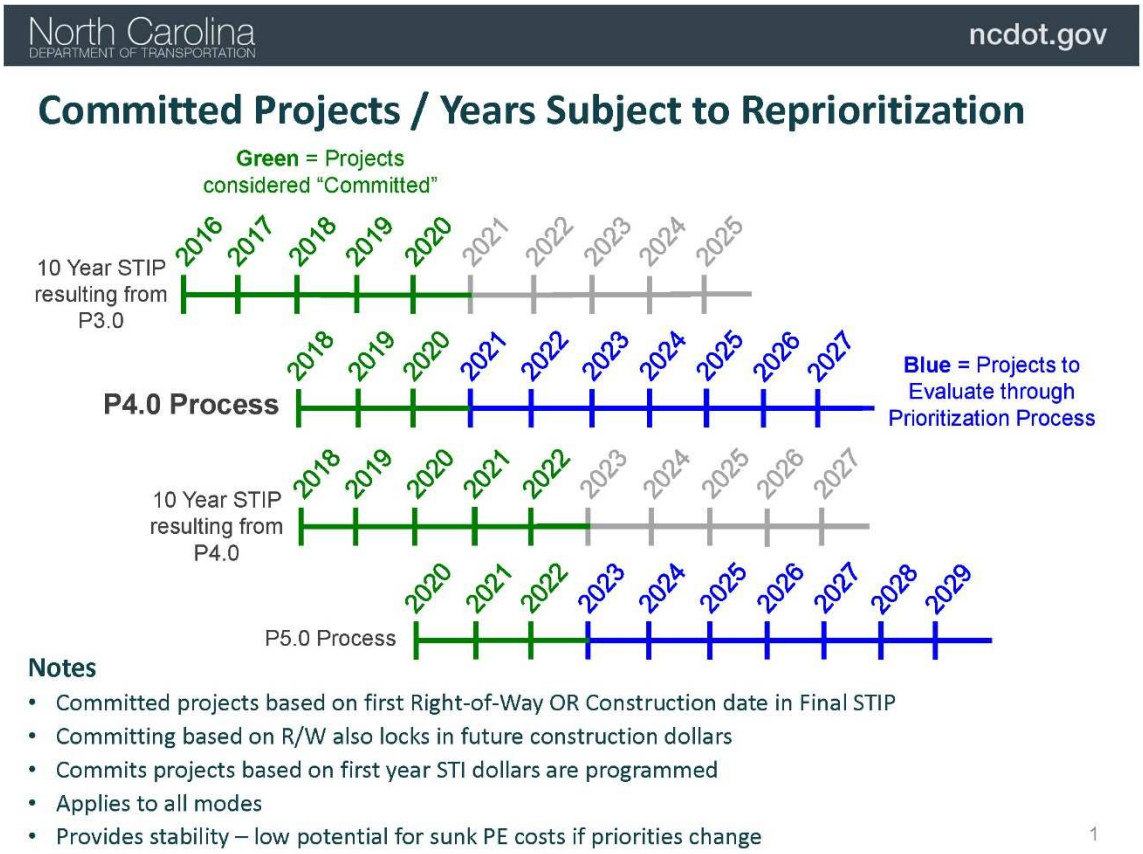
Project Database

In addition to the scoring changes noted above, the Workgroup made the following recommendations for P4.0:

Committed Projects – Since P4.0 was the second generation of the Prioritization Process under STI, a decision was needed to determine which projects in the 10 year STIP would be considered "committed" and not be subject to reprioritization and those projects that should be re-evaluated in P4.0 using the updated criteria and weights. The Workgroup recommended that projects in the Final 2016-2025 STIP with Right-of-Way or Construction programmed in state fiscal year 2016-2020 are considered committed and are not subject to re-evaluation in P4.0. These projects are funded in the "Deliverable" portion of the STIP (first five years). This means that projects first funded for Right-of-Way or

Construction in state fiscal year 2021 and later are re-evaluated in P4.0. These projects are funded in the "Developmental" portion of the STIP (last five years). Figure 1 below provides a visual representation of years of the committed projects.

Figure 2: Projects Evaluated in Ten Year Prioritization Timeframe



Projects to evaluate in P4.0 – There are two types of projects evaluated in P4.0: carryover projects and submittals. The Workgroup recommended the following for each:

Carryover Projects – these projects were evaluated in the previously Prioritization cycle and are automatically evaluated in the subsequent cycle:

- Projects programmed first funded in the 2016-2025 STIP for Right-of-Way or Construction in state fiscal year 2021 and later (projects programmed in the last five years of the STIP as noted above).
- Projects with a completed NEPA document, or one where the environmental document is actively begin worked on as of December 31, 2014

- Siblings of programmed projects, where for example, section A of a project is programmed, sections B, C, & D would be considered a carryover project
- Projects that received any amount of local input points in P3.0 (in either the Regional Impact or Division Needs categories)

Modifications of carryover projects were also allowed without counting as a submittal. This provided MPOs, RPOs, and Divisions an opportunity to evaluate different segments or intersections separately from the larger project, as long as there was agreement between the respective MPOs/RPOs and Divisions.

Submittals – The Workgroup recommended continuing to use the approach from P3.0 to determine the number of projects each MPO and RPO could submit for P4.0. This approach is based on each MPO and RPO having a minimum of 10 project submittals, plus one additional submittal for every 100,000 people in their geographic area, up to a maximum of 20. The Workgroup recommended a different approach for the number of projects each Division could submit, in order to help limit the number of projects evaluated in P4.0. They recommended that each Division could submit up to seven projects. The number of submittals for MPOs, RPOs, and Divisions was the same for each mode for consistency. In addition, each MPO, RPO, and Division could gain additional submittals for every carryover project removed from the database, as long as both the MPO/RPO and Division agreed on the project removal. Submittals are comprised of both brand new projects that have not previously been evaluated in a prioritization cycle and projects that were previously evaluated but are not considered a carryover project. See Appendix D for the listing of the number of submittals for each MPO, RPO, and Division.

Local Input Points

The Workgroup recommended continuing to use the approach from P3.0 to determine the local input points in both the Regional Impact and Division Needs categories allocated to each MPO, RPO, and Division. Each MPO, RPO, and Division received a minimum of 1,000 points, plus an additional 100 points for every 50,000 people in their geographic area, up to a maximum of 2,500 points. Each entity receives a separate allocation but the same number of points for both the Regional Impact and Division Needs categories. Appendix D also lists the number of local input points for each MPO, RPO, and Division.

The Workgroup also recommended to hold separate time periods for assigning points in the Regional Impact and Division Needs categories. In P3.0, there was one 90 day period to assign points to both categories, whereas in P4.0, there were separate periods for each. This allowed MPOs, RPOs, and Divisions to see which projects were funded in the Regional Impact category (and therefore not cascade down) prior to submitting local input points in the Division Needs category. The Workgroup recommended two separate 60 day windows for each period, however to improve coordination on the assignment of points between MPOs, RPOs, and Divisions, the Regional Impact period was over 90 days, while the Division Needs period was 60 days.

In accordance with GS 136-18.42, MPOs and RPOs are required to have a formal methodology approved by NCDOT for assigning local input points. Most MPOs and RPOs updated their methodologies from

P3.0, all of which were reviewed and approved by a NCDOT-led local input point methodology review committee, which included representatives from MPOs and RPOs. The Division Engineers also have a formal process for assignment points. The committee also reviewed their updated methodology for P4.0.

On July 9, 2015, the BOT approved the P4.0 Criteria, Measures, and Weights as recommended by the Workgroup. No changes were made by the BOT from the Workgroup's recommendations.

Comparison of Criteria, Measures and Weights between P4.0 and P3.0 for All Modes

Figure 3: Highway Scoring Criteria, Measures, and Weights

Criteria	P4.0 Measure(s)	P4.0 Weights			P3.0 Measure(s)	P3.0 Weights		
		SW	REG	DIV		SW	REG	DIV
Congestion	• Volume-to-Capacity Ratio • Volume	30%	20%	15%	• Volume-to-Capacity Ratio • Volume	30%	25%	20%
Benefit/Cost	• Travel Time Savings • Safety Benefits • Cost of Project to NCDOT • % Local Contribution	25%	20%	15%	• Travel Time Savings • Cost of Project to NCDOT	30%	25%	20%
Safety	• Critical Crash Rates, Crash Severity, Crash Density (segments) • Crash Frequency, Severity Index (intersections)	15%	10%	10%	• Critical Crash Rates, Crash Severity, Crash Density (segments) • Crash Frequency, Severity Index (intersections)	10%	10%	10%
Economic Comp.	• Long-term Jobs Expected • % Change in County Economy	10%	N/A	N/A	• Long-term Jobs Expected • % Change in Division Economy	10%	N/A	N/A
Multimodal	• Congestion on Route near Multimodal Passenger Terminal • Distance to nearest Multimodal Terminal	5%	N/S	N/S	• Congestion on STRAHNET Routes • Congestion on Routes that provide Direct Connection to Transportation Terminal • Truck Volumes	20%	N/S	N/S
Freight	• Truck Volumes • Congestion on non-Interstate STRAHNET or Designated Future Interstate Route • Distance to nearest Freight Terminal	15%	10%	5%				
Accessibility / Connectivity	• County Economic Indicator • Does the Project Upgrade how the Roadway Functions?	N/A	10%	5%	• Commerce County Tier Designation • Does project upgrade roadway • Commuting times by Census tracts	N/S	10%	N/S
Lane Width	• Comparison of Existing Conditions to DOT Design Standard	N/S	N/S	N/S	• Comparison of Existing Conditions to DOT Design Standard	N/S	N/S	N/S
Shoulder Width	• Comparison of Existing Conditions to DOT Design Standard	N/S	N/S	N/S	• Comparison of Existing Conditions to DOT Design Standard	N/S	N/S	N/S
Pavement Condition	• Pavement Condition Rating	N/S	N/S	N/S	• Pavement Condition Rating	N/S	N/S	N/S

Note: Figure 3 lists the default criteria, measures, and weights for evaluating highway projects. In both P3.0 and P4.0, Regions and Divisions were allowed to use Alternative Criteria, as long as all MPOs, RPOs, and Divisions (within the Region or Division) were in agreement. With Alternate Criteria, the entities within a Region or Division can select different criteria (than the defaults above) and/or assign different weights to the criteria. However, the measure is the same for each criteria across the state. In P3.0, entities within Regions A and B, and Divisions 1, 2, 3, and 4 agreed to the use of Alternate Criteria. In P4.0, entities within Region B, and Divisions 2, 3, and 6 agreed to the use of Alternate Criteria.

N/A = Not Applicable based on the STI law

N/S = Considered, but Not Selected by the Workgroup for use in evaluating projects

Figure 4: Aviation Scoring Criteria, Measures, and Weights

Criteria	P4.0 Measure(s)	P4.0 Weights			P3.0 Measure(s)	P3.0 Weights		
		SW	REG	DIV		SW	REG	DIV
NCDOA Project Rating	• NCDOA Project Rating (reflects updated System Plan)	40%	30%	25%	• NCDOA Project Rating	40%	40%	30%
FAA ACIP Rating	• Federal Aviation Administration Airport Capital Improvement Plan (ACIP) rating	10%	5%	10%	• Federal Aviation Administration Airport Capital Improvement Plan (ACIP) rating	40%	20%	10%
Non-State Contribution Index	• Local, federal, or private funds toward the project • State funds toward the project	30%	20%	5%	Not used			
Benefit/Cost	• Total $ Econ. Contribution of Tier • Total # of Instrument Flight Rule (IFR) Ops of Tier • NCDOA Capital Project Rating • Project Cost	20%	15%	10%	Not used			
Local Investment Index	Not used – data used in Non-State Contribution Index				• Local funds toward the project • State funds toward the project	10%	5%	5%
Federal Investment Index	Not used – data used in Non-State Contribution Index				• Federal funds toward the project • State funds toward the project	10%	5%	-
Volume / Demand Index	Not used – data used as benefit in Benefit/Cost				• Based aircraft, aircraft operations, and recorded Instrument Flight Rule (IFR) operations • Employment density near the airport	-	-	5%

NCDOA = NC Division of Aviation

Figure 5: Bicycle and Pedestrian Scoring Criteria, Measures, and Weights

Criteria	P4.0 Measure(s)	P4.0 Weight DIV	P3.0 Measure(s)	P3.0 Weight DIV
Safety	• Number of crashes • Posted speed limit • Project safety benefit	15%	• Crash Points • Speed Limit Points	15%
Access	• Destination Type within buffer • Distance to Prime Destination	10%	• Destination Type within buffer • Distance to Prime Destination	10%
Demand / Density	• Number of households within buffer • Number of employees within buffer ~Added factor for unoccupied housing units (second homes) + group housing, excluding prisons)	10%	• Number of households within buffer • Number of employees within buffer	10%
Connectivity	• Specific Improvement Type • Degree of bike/ped separation from roadway • ADA compliance • Connectivity to a similar/better project type	10%	Not used	
Cost Effectiveness	• Safety score • Access score • Demand / Density score • Connectivity score • Estimated Project Cost to NCDOT	5%	• Access Points • Demand / Density Points • Cost to NCDOT [was called Benefit-Cost]	10%
Constructability	Not used		• Right-of-Way Acquired • Preliminary Engineering / Design Completed • Environmental Impact Points	5%

Figure 6: Ferry Scoring Criteria, Measures, and Weights

Criteria	P4.0 Measure(s)	P4.0 Weights		P3.0 Measure(s)	P3.0 Weights	
		REG	DIV		REG	DIV
Asset Condition	• Asset Condition Rating	15%	15%	• Average Vessel Health Ratings • Average Ramp & Gantry Ratings [was called Safety]	15%	15%
Benefits	• Monetized value of number of hours saved	10%	10%	• Highway hours on alternate route • Hours on ferry crossing [was called Benefit/Cost]	15%	15%
Accessibility / Connectivity	• Number of points of interest within 3 concentric rings of the route	10%	10%	• Number of points of interest within 3 concentric rings of the route	10%	10%
Asset Efficiency	• 3-year maintenance cost • Pro-rated 3-year replacement cost	15%	15%	• 3-year maintenance cost • Pro-rated 3-year replacement cost	10%	10%
Capacity / Congestion	• Number of vehicles left behind at each departure • Total number of vehicles loaded and carried by the route	20%	-	• Number of vehicles left behind at each departure • Total number of vehicles loaded and carried by the route	20%	-

Figure 7: Public Transportation Scoring Criteria, Measures, and Weights

Public Transportation – Vehicles

Criteria	P4.0 Measure(s)	P4.0 Weights		P3.0 Measure(s)	P3.0 Weights	
		REG	DIV		REG	Div
Access	• Annual OpStat Reported Hours • Vehicles in Fleet	10%	5%	Not used		
System Safety	• OpStat Reported Miles • 3 Year Average of Incidents	10%	10%	Not used		
Impact	• Unlinked Annual Passenger Trips • Projected New Unlinked Annual Passenger Trips	20%	15%	Not used		
Cost Effectiveness	• Projected New Annual Unlinked Passenger Trips • Cost to the State	20%	15%	Not used		
Market Share	• Unlinked Annual Passenger Trips • Projected New Unlinked Annual Passenger Trips • Service Area Population	10%	5%	Not used		
Benefit-Cost	Not used			• Projected ridership • Cost to the State	45%	25%
Vehicle Utilization Data	Not used			• Maximum vehicles utilized during the peak hour • Total fleet size	5%	5%
System Safety	Not used			• Transit system safety statistics • National average safety statistics	5%	5%
Connectivity	Not used			• Projected increase in ridership • Types of destinations served • Projected ridership	5%	5%
System Operational Efficiency	Not used			• Annual ridership • Service hours • Revenue hours	10%	10%

Public Transportation – Facilities (Passenger or Administrative/Maintenance/Operations)

Criteria	P4.0 Measure(s)	P4.0 Weights		P3.0 Measure(s)	P3.0 Weights	
		REG	DIV		REG	DIV
Impact (or) Age	• Unlinked Annual Passenger Trips • Projected New Unlinked Annual Passenger Trips • Additional capacity • Existing capacity • Age of facility	20%	15%	Not used		
Cost Effectiveness	• Unlinked Annual Passenger Trips • Cost to the State	20%	15%	Not used		
Market Share	• Unlinked Annual Passenger Trips • Projected New Unlinked Annual Passenger Trips • Service Area Population	15%	10%	Not used		
Ridership Growth	• Ridership Growth Trend for previous 5 years	15%	10%	Not used		
Age of Facility (or) Facility Demand (or) Park & Ride Demand (or) Bus Shelter Demand	Not used			• Facility age • Peak service vehicles • Facility capacity • Number of spaces in lot • State match • Average boardings • Average alightings	40%	30%
Benefit-Cost	Not used			• Annual trips provided by facility • State match	5%	5%
System Operational Efficiency	Not used			• Annual ridership • Service hours • Revenue hours	5%	5%
Facility Capacity	Not used			• Proposed capacity • Current usage • Existing design capacity	20%	20%

Public Transportation – Fixed Guideway

Criteria	P4.0 Measure(s)	P4.0 Weights		P3.0 Measure(s)	P3.0 Weights	
		REG	DIV		REG	DIV
Mobility	• Estimated Annual Trips	20%	15%	• Estimated Annual Trips	20%	15%
Cost Effectiveness	• Cost of the Trip Over the Life of the Project	15%	15%	• Cost of the Trip Over the Life of the Project	15%	15%
Economic Development	• Number of new employees • Number of new residents	20%	10%	• Number of new employees • Number of new residents	20%	10%
Congestion Relief	• Passengers/Day • Average Time of Trip	15%	10%	• Passengers/Day • Average Time of Trip	15%	10%

Figure 8: Rail Scoring Criteria, Measures, and Weights

Criteria	P4.0 Measure(s)	P4.0 Weights			P3.0 Measure(s)	P3.0 Weight		
		SW	REG	DIV		SW	REG	DIV
Cost Effectiveness	• Return on Investment Index • Regional Job Creation Index	35%	25%	20%	Not used			
System Health	• Capacity Index • Accessibility/Connectivity Index	35%	20%	10%	Not used			
Safety and Suitability	• Safety Index	20%	15%	10%	Not used			
Project Support	• Funding Leverage Index	10%	10%	10%	Not used			
Benefit Cost	Not used – incorporated into Cost Effectiveness				• Benefits due to emissions savings, fuel savings, travel time savings, and highway-to-rail diversions	VAR	VAR	VAR
Economic Competitiveness	Not used – incorporated into Cost Effectiveness				• Number of jobs	VAR	VAR	VAR
Capacity / Congestion	Not used – incorporated into System Health				• Current daily volume • Maximum daily allowable volume	VAR	VAR	VAR
Safety	Not used – incorporated into Safety and Suitability				• Safety Review Index	VAR	VAR	VAR
Accessibility	Not used – incorporated into System Health				• Project length • National Highway System miles • County unemployment rate	VAR	VAR	VAR
Connectivity	Not used – incorporated into System Health				• Projected daily volume • National Highway System facilities • Ridership increase	VAR	VAR	VAR
Mobility	Not used				• Future capacity • Current capacity • Number of trains • Current daily volume • Projected daily volume • Population	VAR	VAR	VAR

VAR = Varies. P4.0 utilized 4 different project types that were assigned varying weights or eligibility within each criteria and each STI category.

PRIORITIZATION 4.0 IMPLEMENTATION

MPOs, RPOs, and Divisions submitted candidate projects for P4.0 for all six modes (Aviation, Bicycle & Pedestrian, Ferry, Highway, Public Transportation, and Rail) during the period of October 20th through November 20th, 2015, using the SPOT On!ine application, which was updated for P4.0. Following the submittal of projects, the Prioritization Office, in coordination with several other business units, reviewed and updated the data associated with each project to ensure it was as accurate as possible. Project submitters (MPOs, RPOs, and Divisions) had an opportunity to review any updated data as well. Once the data was considered clean, scores were updated as needed. All projects were scored using the criteria and weights approved by the BOT in July 2015 (see Appendix E). The quantitative scores for all projects and the top-scoring projects funded in the Statewide Mobility category were released on April 13, 2016 in user-friendly spreadsheets.

As recommended by the Workgroup and approved by the BOT, each MPO, RPO, and Division had two time periods to assign local input points. Each entity assigned their Regional Impact local input points between April 18th and July 29th, 2016 based on their approved methodologies. In August 2016, the Prioritization Office first calculated the total scores for all Regional Impact projects, then the TIP Unit developed the draft list of funded Regional Impact projects. The final scores and list of funded projects were released on August 24, 2016.

The Division Needs local input point assignment period was originally scheduled from September 1st to October 31st, however due to the flooding experienced from Hurricane Matthew, this period was extended to November 14th. Following the submittal of the Division Needs local input points, the Prioritization Office calculated the total scores for all Division Needs projects.

At the time of writing of this report, the TIP Unit is currently programming the highest scoring Division Needs projects. This list of funded projects will be released with all of the other funded projects in the 2018-2027 Draft STIP, with the anticipated release of January 2017. The TIP Unit combines the lists of funded projects from the Statewide Mobility, Region Impact, and Division Needs categories in developing the Draft STIP. Similar to P3.0, the prioritization results are the primary input in determining the funded projects. Other factors considered are:

- Normalization approach for allocating funds between highway and non-highway projects
- Funds allocated to transition projects (projects let between October 1, 2013 and July 1, 2015)
- Provisions in the STI law such as corridor caps and caps affecting non-highway projects
- Project delivery time
- Funding availability for each STI category

The Department anticipates updating this document by March 31, 2017 with the full results from P4.0 and the resulting impact to 2018-2027 Draft STIP.

PRIORITIZATION 4.0 RESULTS

A total of nearly 2,000 projects at a cost to NCDOT of almost $57 billion were evaluated in P4.0, for the time period of 2021-2027 (projects in 2018-2020 are considered committed and were not evaluated in P4.0). The breakdown by mode is shown below in Figure 1.

Figure 9: P4.0 Projects Evaluated by Mode with 2018-2027 STIP Programmed Amounts

Mode	Total Projects Evaluated	Cost to NCDOT ($million)	Total Projects Programmed in 2018-2027 Draft STIP*	Amount Programmed in 2018-2027* ($million)
Highway	1202	$52,864		
Aviation	176	$483		
Bicycle & Pedestrian	358	$380		
Ferry	9	$113		
Public Transportation	114	$42		
Rail	70	$2,756		
Total	**1,929**	**$56,638**		

*These values will be provided following release of the 2018-2027 Draft STIP in January 2017.

APPENDIX A – P3.0 SCORING CRITERIA, MEASURES, AND WEIGHTS FOR ALL MODES

Highway Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Statewide Mobility	**[Travel Time] Benefit/Cost = 30%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT **Congestion = 30%** • Comparison of the existing traffic volume to the existing capacity of the roadway (depending on data availability, Congestion may be measured by comparing congested travel speeds to uncongested speeds) **Economic Competitiveness = 10%** • Estimate of the number of long-term jobs and the % change in economic activity within the NCDOT Division the project is expected to provide over 30 years **Safety = 10%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Multimodal [& Freight + Military] = 20%** • Measure of existing congestion along key military and truck routes, and routes that provide connections to transp. terminals **Total = 100%**	--	--
Regional Impact	**[Travel Time] Benefit/Cost = 25%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT **Congestion = 25%** • Comparison of the existing traffic volume to the existing capacity of the roadway (depending on data availability, Congestion may be measured by comparing congested travel speeds to uncongested speeds) **Accessibility/Connectivity = 10%** • Three component formula using commute times by census tracts, upgrade of travel function of roadway, and Department of Commerce County Tier designations **Safety = 10%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Total = 70%**	**15%**	**15%**
Division Needs	**[Travel Time] Benefit/Cost = 20%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT **Congestion = 20%** • Comparison of the existing traffic volume to the existing capacity of the roadway **Safety = 10%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Total = 50%**	**25%**	**25%**

Note: Divisions 1, 2, 3, 4 have approved different criteria and weights for their respective areas – see end of Appendix A.

Aviation Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Statewide Mobility	**NCDOA Project Rating = 40%** • Projects prioritized and classified within NC Division of Aviation (NCDOA) established project categories. Assigns point values based on priority of the project and need of the project **FAA Airport Capital Improvement Plan = 40%** • Federal Aviation Administration Airport Capital Improvement Plan (ACIP) Rating. Ratings based on critical airport development and capital needs within National Airspace System (NAS) **Local Investment Index = 10%** • A measurement of the project's local funds compared to state funds and provides greater points for projects that have a higher % of local funding sources (i.e. local or public-private funds) **Federal Investment Index = 10%** • A measurement of the project's federal funds compared to state funds and provides greater points for projects with higher % of federal funds verses state funds **Total = 100%**	--	--
Regional Impact	**NCDOA Project Rating = 40%** • Projects prioritized and classified within NC Division of Aviation (NCDOA) established project categories. Assigns point values based on priority of the project and need of the project **FAA Airport Capital Improvement Plan = 20%** • Federal Aviation Administration Airport Capital Improvement Plan (ACIP) Rating. Ratings based on critical airport development and capital needs within National Airspace System (NAS) **Local Investment Index = 5%** • A measurement of the project's local funds compared to state funds and provides greater points for projects that have a higher % of local funding sources (i.e. local or public-private funds) **Federal Investment Index = 5%** • A measurement of the project's federal funds compared to state funds and provides greater points for projects with higher % of federal funds verses state funds **Total = 70%**	**15%**	**15%**
Division Needs	**NCDOA Project Rating = 30%** • Projects prioritized and classified within NC Division of Aviation (NCDOA) established project categories. Assigns point values based on priority of the project and need of the project **FAA Airport Capital Improvement Plan = 10%** • Federal Aviation Administration Airport Capital Improvement Plan (ACIP) Rating **Local Investment Index = 5%** • A measurement of the project's local funds compared to state funds and provides greater points for projects that have a higher % of local funding sources (i.e. local or public-private funds) **Volume/Demand Index = 5%** • Index representing traffic (aircraft operations) plus employment density (jobs near the airport). Identifies projects where there is more traffic and in areas with more user demand **Total = 50%**	**25%**	**25%**

Bicycle & Pedestrian Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**Access = 10%** • This criterion measures community benefit as a result of constructing the proposed project, and is measured by the quantity and significance of destinations associated with the proposed project. Access benefit is also measured by the proximity of the proposed project to the most important end destination **Constructability = 5%** • This criterion measures the readiness of a project to be constructed in the near term. Factors such as secured right-of-way, environmental impact, and preliminary engineering work complete are used to calculate this score **Safety = 15%** • This criterion uses bicycle and pedestrian crash data and speed limit information along project corridors to determine the existing safety need **Demand Density = 10%** • This criterion measures user benefit as a result of constructing the proposed project, and it is measured by the density of population and employment within a walkable or bike-able distance of the proposed project **Benefit/Cost = 10%** • This criterion adds the Access and Demand scores together to create a combined benefit score, and then the benefit is divided into the cost of the project to NCDOT **Total = 50%**	**25%**	**25%**

Ferry Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact *(Note: all vessels are excluded from this category)*	**Safety [Route Health Index] = 15%** • The safety analysis of the ferry route based an Asset Health Index that is determined based on the condition ratings of the vessels and the ramps & gantries **Benefit/Cost [Travel Time] = 15%** • Travel time savings determined by comparing the travel hours saved by utilizing the various ferry routes instead of taking the shortest available alternative route **Accessibility/Connectivity = 10%** • A measurement of the accessibility and connectivity provided by the various routes based on the number of points of interest within travel radii of 10, 20, & 30 miles **Asset Efficiency = 10%** • An evaluation of the cost effectiveness of asset operations in respect to continued maintenance on an asset versus the replacement costs of the subject asset **Capacity/Congestion = 20%** • A measure of the capacity/congestion by an evaluation of the vehicles that are left behind each time a ferry vessel departs compared to the total numbers of vehicles carried by the route in a year **Total = 70%**	**15%**	**15%**
Division Needs	**Safety [Route Health Index] = 15%** • The safety analysis of the ferry route based an Asset Health Index that is determined based on the condition ratings of the vessels and the ramps & gantries **Benefit/Cost [Travel Time] = 15%** • Travel time savings determined by comparing the travel hours saved by utilizing the various ferry routes instead of taking the shortest available alternative route **Accessibility/Connectivity = 10%** • A measurement of the accessibility and connectivity provided by the various routes based on the number of points of interest within travel radii of 10, 20, & 30 miles **Asset Efficiency = 10%** • An evaluation of the cost effectiveness of asset operations in respect to continued maintenance on an asset versus the replacement costs of the subject asset **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Expansion)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	**Benefit/Cost = 45%** • Assesses the projected ridership for the life of the expansion vehicle relative to the cost of the vehicle to the state **Vehicle Utilization Data = 5%** • Examines how systems are maximizing current fleet **System Safety = 5%** • Compares system safety statistics to the national average **Connectivity = 5%** • Measures the connectivity of the proposed expansion of service to destinations (education, medical, employment, retail, other transfers) **System Operational Efficiency = 10%** • Compares the number of trips to revenue hours reported **Total = 70%**	**15%**	**15%**
Division Needs	**Benefit/Cost = 25%** • Assesses the projected ridership for the life of the expansion vehicle relative to the cost of the vehicle to the state **Vehicle Utilization Data = 5%** • Examines how systems are maximizing current fleet **System Safety = 5%** • Compares system safety statistics to the national average **Connectivity = 5%** • Measures the connectivity of the proposed expansion of service to vital destinations **System Operational Efficiency = 10%** • Compares the number of trips to revenue hours reported **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Facilities)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	**Age of Facility, Facility Demand, Park & Ride, Bus Shelter = 40%** • Age: examines the age of the facility compared to the useful life of the facility • Facility Demand: measures the demand for new or expanded maintenance and operations facilities • Park & Ride: compares utilization to cost to state to construct • Bus Shelter: examines current demand (boardings and alightings) at the proposed shelter location **Benefit-Cost = 5%** • Examines the benefit (trips) relative to the cost of the project to the state **System Operational Efficiency = 5%** • Compares the number of trips to revenue hours reported **Facility Capacity = 20%** • Identifies the need for additional capacity by comparing proposed capacity, current usage, and current capacity **Total = 70%**	**15%**	**15%**
Division Needs	**Age of Facility, Facility Demand, Park & Ride, Bus Shelter = 30%** • Age: examines the age of the facility compared to the useful life of the facility • Facility Demand: measures the demand for new or expanded maintenance and operations facilities • Park & Ride: compares utilization to cost to state to construct • Bus Shelter: examines current demand (boardings and alightings) at the proposed shelter location **Benefit-Cost = 5%** • Examines the benefit (trips) relative to the cost of the project to the state **System Operational Efficiency = 5%** • Compares the number of trips to revenue hours reported **Facility Capacity = 10%** • Identifies the need for additional capacity by comparing proposed capacity, current usage, and current capacity **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Fixed Guideway)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	**Mobility = 20%** • Measures the project usage (annual trips) **Cost Effectiveness = 15%** • Measures the cost effectiveness of the project per trip over the life of the project **Economic Development = 20%** • Measures the new employment and population growth in the fixed guideway corridor over 20 years **Congestion Relief = 15%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project **Total = 70%**	**15%**	**15%**
Division Needs	**Mobility = 15%** • Measures the project usage (annual trips) **Cost Effectiveness = 15%** • Measures the cost effectiveness of the project per trip over the life of the project **Economic Development = 10%** • Measures the new employment and population growth in the fixed guideway corridor over 20 years **Congestion Relief = 10%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project **Total = 50%**	**25%**	**25%**

Rail Scoring (Track and Structures)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Statewide Mobility (Class I Freight Only)	**Benefit/Cost = 20%** • Benefits associated with emissions savings, fuel savings, travel time savings divided by the project cost to the state **Economic Competitiveness = 10%** • High-level relative measure of the anticipated statewide benefits of project improvements in numbers of jobs **Capacity/Congestion = 15%** • Percentage that the existing track segment is over-capacity **Safety = 15%** • Crash potential for railroad/highway at-grade crossings **Accessibility = 10%** • Measures the potential for new or improved accessibility to rail service for industries by a freight rail project **Connectivity = 10%** • Values projects on strategic corridors, carrying military, ports, intermodal and transload traffic **Mobility = 20%** • Measures either the change in percentage of available capacity or travel time savings provided by project **Total = 100%**	--	--
Regional Impact (Freight / Passenger)	**Benefit/Cost = 10% (freight) / 10% (passenger)** • Benefits associated with emissions savings, fuel savings, travel time savings divided by the project cost to the state **Capacity/Congestion = 15% (freight) / 25% (passenger)** • Percentage that the existing track segment is over-capacity **Safety = 15% (freight) / 15% (passenger)** • Crash potential for railroad/highway at-grade crossings **Accessibility = 10% (freight only)** • Measures the potential for new or improved accessibility to rail service for industries by a freight rail project **Connectivity = 5% (freight only)** • Values projects on strategic corridors, carrying military, ports, intermodal and transload traffic **Mobility = 15% (freight) / 20% (passenger)** • Measures either the change in percentage of available capacity or travel time savings provided by project **Total = 70%**	**15%**	**15%**
Division Needs (Freight / Passenger)	**Benefit/Cost = 10% (freight) / 10% (passenger)** • Benefits associated with emissions savings, fuel savings, travel time savings divided by the project cost to the state **Capacity/Congestion = 10% (freight) / 15% (passenger)** • Percentage that the existing track segment is over-capacity **Safety = 10% (freight) / 10% (passenger)** • Crash potential for railroad/highway at-grade crossings **Accessibility = 5% (freight only)** • Measures the potential for new or improved accessibility to rail service for industries by a freight rail project **Connectivity = 5% (freight only)** • Values projects on strategic corridors, carrying military, ports, intermodal and transload traffic	**25%**	**25%**

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
	Mobility = 10% (freight) / 15% (passenger) • Measures either the change in percentage of available capacity or travel time savings provided by project **Total = 50%**		

Rail Scoring (Freight Intermodal Facilities / Intercity Passenger Service & Stations)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact (Intercity Passenger Service Only)	**Benefit/Cost = 15%** • Benefits associated with emissions savings, fuel savings, travel time savings divided by the project cost to the state **Capacity/Congestion = 25%** • Percentage that the existing facility is over-capacity **Connectivity = 10%** • Values projects based on type and value of connections to intercity passenger service, commuter service, bus service and parking **Mobility = 20%** • Values daily volumes in relation to catchment area population **Total = 70%**	**15%**	**15%**
Division Needs (Facilities/ Intercity Passenger Service & Stations)	**Benefit/Cost = 10%** • Benefits associated with emissions savings, fuel savings, travel time savings divided by the project cost to the state **Capacity/Congestion = 15%** • Percentage that the existing facility is over-capacity **Connectivity = 10%** • Values passenger projects based on type and value of connections to intercity passenger service, commuter service, bus service and parking • Values projects serving military, port, intermodal and transload traffic and % of NC population in catchment area **Mobility = 15%** • Values daily volumes in relation to catchment area population **Total = 50%**	**25%**	**25%**

Highway Scoring - Alternate Criteria for Region A (Divisions 1 & 4)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	**[Travel Time] Benefit/Cost = 20%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT. *Toll revenues anticipated from a project will reduce the cost to NCDOT and therefore increase the score in this criteria* **Congestion = 15%** • Comparison of the existing traffic volume to the existing capacity of the roadway (depending on data availability, Congestion may be measured by comparing congested travel speeds to uncongested speeds) **Safety = 15%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Lane Width = 10%** • Comparison of existing lane width to NCDOT Design standards. The greater the difference the higher the points awarded **Shoulder Width = 10%** • Comparison of existing paved shoulder width to NCDOT Design standards. The greater the difference the higher the points awarded **Total = 70%**	**15%**	**15%**

Highway Scoring - Alternate Criteria for Region B (Divisions 2 & 3)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	**[Travel Time] Benefit/Cost = 20%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT. *Toll revenues anticipated from a project will reduce the cost to NCDOT and therefore increase the score in this criteria* **Safety = 25%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Multimodal [& Freight + Military] = 25%** • Measure of existing congestion along key military and truck routes, and routes that provide connections to transportation terminals **Total = 70%**	**15%**	**15%**

Highway Scoring - Alternate Criteria for Divisions 1 & 4

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**[Travel Time] Benefit/Cost = 10%** • Travel time savings the project is expected to provide over 30 years divided by the cost of the project to NCDOT. *Toll revenues anticipated from a project will reduce the cost to NCDOT and therefore increase the score in this criteria* **Congestion = 10%** • Comparison of the existing traffic volume to the existing capacity of the roadway (depending on data availability, Congestion may be measured by comparing congested travel speeds to uncongested speeds) **Safety = 10%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Lane Width = 10%** • Comparison of existing lane width to NCDOT Design standards. The greater the difference the higher the points awarded **Shoulder Width = 10%** • Comparison of existing paved shoulder width to NCDOT Design standards. The greater the difference the higher the points awarded **Total = 50%**	**25%**	**25%**

Highway Scoring - Alternate Criteria for Divisions 2 & 3

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**Congestion = 20%** • Comparison of the existing traffic volume to the existing capacity of the roadway (depending on data availability, Congestion may be measured by comparing congested travel speeds to uncongested speeds) **Safety = 20%** • Evaluation of the number, severity, and frequency of crashes along the roadway **Multimodal [& Freight + Military] = 10%** • Measure of existing congestion along key military and truck routes, and routes that provide connections to transportation terminals **Total = 50%**	**25%**	**25%**

APPENDIX B – P4.0 WORKGROUP MEMBERS

Full Name	Organization/Unit	Member Type
Betty Huskins	North Carolina Regional Council of Governments	Participant
Chris Lukasina	Capital Area MPO	Participant
Dana Stoogenke	Rocky River RPO	Participant
David Wasserman	NCDOT Prioritization Office (SPOT)	Participant
Debbie Barbour	NCDOT Preconstruction	Participant
Don Voelker	NCDOT Prioritization Office (SPOT)	Participant
Jay Swain	NCDOT Division Thirteen Engineer	Participant
Johanna Reese	North Carolina Association of County Commissioners	Participant
John Rouse	NCDOT Division Two Engineer	Participant
Julie White	North Carolina Metropolitan Mayor's Coalition	Participant
Karyl Fuller	Isothermal RPO	Participant
Lauren Blackburn	NCDOT - Non-highway modes	Participant
Louis Mitchell	NCDOT Division Ten Engineer	Participant
Matt Day	Triangle Area RPO	Participant
Mike Holder	NCDOT Chief Engineer's Office	Participant
Neil Burke	Charlotte Regional Transportation Planning Org.	Participant
Patrick Flanagan	Eastern Carolina RPO	Participant
Patrick Norman	NCDOT Transportation Planning Branch	Participant
Peggy Holland	Jacksonville Urban Area MPO	Participant
Rob Stone	NCDOT Division Eight Engineer	Participant
Rose Williams	North Carolina League of Municipalities	Participant
Sarah Lee	NCDOT Prioritization Office (SPOT)	Participant
Tyler Meyer	Greensboro Urban Area MPO	Participant
Van Argabright	NCDOT Program Development Branch	Participant
Susan Pullium	NCDOT Strategic Planning	Facilitator
Amna Cameron	Legislative Staff	Advisory
Bryce Ball	Legislative Staff	Advisory
Dan Madding	Department of Agriculture	Advisory
Frank Winn	NCDOT IT	Advisory
George Hoops	Federal Highway Administration	Advisory
Hugh Johnson	Governor's Office	Advisory
Jason Soper	Legislative Staff - House	Advisory
Jeff DeBellis	Department of Commerce	Advisory
Kolt Ulm	Legislative Staff - Senate	Advisory
Stephanie Ayers	NC State Ports Authority	Advisory
Shelly Heath	NCDOT	Administrative

APPENDIX C – P4.0 CONSENSUS ITEMS

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
9/22/2014	*Welcome/Kick-Off*	Decision Making Process	Use a consensus approach where possible, only 'call for a vote' when absolutely necessary	Consensus	
10/20/2014	*Plus/Delta;* *Establishing Priorities*	n/a	n/a	n/a	
11/3/2014	*P3.0 Review;* *P4.0 Schedule*	n/a	n/a	n/a	
11/17/2014	*P3.0 Review;* *P4.0 Potential Changes*	P4.0 Schedule	2 - 60 day local input periods	Consensus	
12/1/2014	*Commerce Update;* *Potential Changes*	Emergency Evacuation Routes*	Can be included but should be measured as part of local input points if important to an area*	Consensus	*Reviewed discussion multiple times, see final decision on 3/30/15
12/15/2014	*Goals for Prioritization;* *Re-prioritization*	Goals for Prioritization	Acceptable as written during P3.0	Consensus	
		Projects not subject to re-prioritization	ROW or construction w/in first 5 years of STIP	Consensus	
1/5/2015	*Update on current efforts external to workgroup*	n/a	n/a	n/a	
1/20/2015	*Midterm Review;* *Potential Changes*	Land Use	Do not include in P4.0 criteria	Consensus	
2/2/2015	*Cambridge Recommendations;* *Peak ADT;* *Potential Changes*	Cambridge Global Recommendations	Improve consistency of terminology used in multiple modes	Consensus	
2/2/2015		Cambridge Global Recommendations	When possible, calculate future benefits rather than current conditions	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
2/2/2015		Cambridge Global Recommendations	Scale all criteria on a relative basis based on the distribution of results from projects included in P3.0	Consensus	
2/2/2015		Cambridge Global Recommendations	Rely on consistent scaling of mode-specific criteria for evaluating projects across modes	Consensus	
2/2/2015		Cambridge: Ensure transparency when evaluating across modes	Continue using the P3.0 method of allocating funds across highway vs. non-highway	Consensus	
2/2/2015		Route Continuity	Due to constrained criteria in STI legislation, route continuity should be measured as part of local input points if important to an area	Consensus	
2/16/2015	*Potential Changes to Criteria*	Accessibility/Connectivity	50% County Tier Designation (based on economic distress indicator from DOC) + 50% Upgrade of Roadway Function (based on chart of improvement types & travel time savings/user)	Consensus	
2/16/2015		Multimodal [&Freight+Military]	Split into two separate criteria, one for passenger and one for freight	Consensus	
2/16/2015		Multimodal [+Military]	40% V/C along route if project is within 5 miles of a multimodal passenger terminal + 60% proximity (graduated within 5 miles) to multimodal passenger/military terminal	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
2/16/2015		Freight [+Military]	50% Truck volume along route + 30% V/C if project is non-interstate STRAHNET or future interstate + 20% proximity (graduated within 20 miles) to freight/military terminal	Consensus	
2/16/2015		Scoring by Improvement Type (Highway Projects)	Continue P3.0 methodology of scoring all highway projects using the same criteria	Consensus	
3/2/2015	*Potential Changes in Criteria;* *Non-Highway Review*	Pavement Condition	Continue using the P3.0 method of scoring	Consensus	
3/2/2015		Lane Width	Continue using the P3.0 method of scoring	Consensus	
3/2/2015		Shoulder Width	Continue using the P3.0 method of scoring	Consensus	
3/2/2015		Economic Competitiveness	Continue using the P3.0 method of scoring; continue to review/refine inputs to the model	Consensus	
3/16/2015	*Potential Changes in Criteria;* *Travel Demand Model Update;* *Non-Highway Criteria*	Category Specific Measures	Use the same criteria definitions across all three categories (statewide, regional, division) for the following critieria: Benefit/Cost*, Safety, Freight*, Economic Competitiveness*, Accessibility/Connectivity*, Lane Width, Shoulder Width, Pavement **subject to potential use of NCSTM*	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/16/2015		Inputs to TREDIS	Travel Growth Rate: use VMT growth rate by county, area type, and facility type from NCSTM	Consensus	
3/16/2015		Peak ADT	Develop location specific factors for all primary routes. Use default factors for secondary routes, and examine developing location specific factors for secondary routes if time and resources allow.	Consensus	
3/16/2015		Peak ADT	Use PADT in Congestion (volume/capacity and volume), Freight (volume/capacity), and Multi-Modal (volume/capacity). AADT will continue to be used for calculation of travel time savings (Benefit-Cost and Economic Competitiveness) if statewide model is not used.	Consensus	
3/16/2015		Congestion	Statewide: [((PADT/Capacity) x 60%) + ((PADT) x 40%)] Regional: [((PADT/Capacity) x 80%)) + ((PADT) x 20%))] Division: [PADT/Capacity]	Consensus	
3/16/2015		Benefit-Cost	[(Total Benefits over 10 years/Cost to NCDOT) + (("Other Funds"/Total Project Cost) x 100)]	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Safety: 40% B/P Crashes + 40% Posted Speed Limit + 20% Safety Benefit	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/16/2015		Bicycle/Pedestrian Criteria	Access: continue using P3.0 method, adding regional significant B/P facilities to 'Major Centers' and removing household density from both 'Major Centers' and 'Secondary Centers'	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Demand-Density: continue using P3.0 method, adding 'factor for unoccupied housing units (second homes),' and 'group housing, excluding prison facilities'	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Constructability: remove	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Connectivity: quality of service-consistency index score [$CQOS_{endA}$+$CQOS_{endB...}$/n]	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Cost-Effectiveness: [(Safety+Access+Demand-Density+Connectivity)/cost to NCDOT]	Consensus	
3/16/2015		Bicycle/Pedestrian Criteria	Criteria Weights: Safety - 15%, Access - 10%, Demand-Density - 10%, Connectivity - 10%, Cost-Effectiveness - 5%	Consensus	
3/30/2015	*Non-Highway Criteria; Highway Criteria Weights*	Emergency Evacuation Routes*	Should be measured as part of local input points if important to an area*	Agreement	*Reviewed discussion multiple times, NCDOT agreed to remove from future P4.0 discussion, original decision from 12/1/14 upheld

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Public Transportation Criteria: Vehicle	Access: annual OpStat reported hours / vehicles in fleet	Consensus	
3/30/2015		Public Transportation Criteria: Vehicle	Safety: OpStat reported miles divided by 3 Year average of incidents*	Consensus	
3/30/2015		Public Transportation Criteria: Vehicle	Impact: (unlinked annual passenger trips + projected new unlinked annual passenger trips) / unlinked annual passenger trips	Consensus	
3/30/2015		Public Transportation Criteria: Vehicle	Cost-Effectiveness: projected new annual unlinked passenger trips for the life of the vehicle / cost to the state	Consensus	
3/30/2015		Public Transportation Criteria: Vehicle	Market Share: (unlinked annual passenger trips + projected new unlinked annual passenger trips) / service area population	Consensus	
3/30/2015		Public Transportation Criteria: Vehicle	Criteria Weights (Regional Impact): Access - 10%, Safety - 5%*, Impact - 20%, Cost-Effectiveness - 20%, Market Share - 15%*	Consensus	*Asked PTD to determine if transit working group has concerns with these edited percentages for 'safety' and 'market share'
3/30/2015		Public Transportation Criteria: Vehicle	Criteria Weights (Division Needs): Access - 5%, Safety - 5%*, Impact - 15%, Cost-Effectiveness - 15%, Market Share - 10%*	Consensus	*Asked PTD to determine if transit working group has concerns with these edited percentages for 'safety' and 'market share'

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Public Transportation Criteria: Facility-Passenger	Impact (either/or - age)*: (unlinked annual passenger trips + projected new unlinked annual passenger trips) / unlinked annual passenger trips	Consensus	*Criteria only used to evaluate expansion facilities
3/30/2015		Public Transportation Criteria: Facility-Passenger	Age (either/or - impact)*: age / 45 years	Consensus	*Criteria only used to evaluate replacement facilities
3/30/2015		Public Transportation Criteria: Facility-Passenger	Cost Effectiveness: estimated trips for the life of the facility / cost to the state	Consensus	
3/30/2015		Public Transportation Criteria: Facility-Passenger	Market Share: (unlinked annual passenger trips + projected annual unlinked passenger trips) / service area population	Consensus	
3/30/2015		Public Transportation Criteria: Facility-Passenger	Ridership Growth: ridership growth trend for the previous 5 years	Consensus	
3/30/2015		Public Transportation Criteria: Facility-Admin/Maint/Oper	Impact (either/or - age)*: (additional capacity + existing capacity) / existing capacity	Consensus	*Criteria only used to evaluate expansion facilities
3/30/2015		Public Transportation Criteria: Facility-Admin/Maint/Oper	Age (either/or - impact)*: age / 45 years	Consensus	*Criteria only used to evaluate replacement facilities
3/30/2015		Public Transportation Criteria: Facility-Admin/Maint/Oper	Cost Effectiveness: unlinked passenger trips for the life of the facility / cost to the state	Consensus	
3/30/2015		Public Transportation Criteria: Facility-Admin/Maint/Oper	Market Share: (unlinked annual passenger trips + projected annual unlinked passenger trips) / service area population	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Public Transportation Criteria: Facility-Admin/Maint/Oper	Ridership Growth: ridership growth trend for the previous 5 years	Consensus	
3/30/2015		Public Transportation Criteria: Facility	Criteria Weights (Regional Impact): Impact or Age - 20%, Cost-Effectiveness - 20%, Market Share - 15%, Ridership Growth - 15%	Consensus	
3/30/2015		Public Transportation Criteria: Facility	Criteria Weights (Division Needs): Impact or Age - 15%, Cost-Effectiveness - 15%, Market Share - 10%, Ridership Growth - 10%	Consensus	
3/30/2015		Public Transportation Criteria: Fixed Guideway	Mobility: estimated annual trips (1 point for every 250,000 trips)	Consensus	
3/30/2015		Public Transportation Criteria: Fixed Guideway	Cost-Effectiveness: cost of the trip over the life of the project (100 points for a cost of $4 or less per trip; decreasing by 1 point for every $0.11 increase per trip)	Consensus	
3/30/2015		Public Transportation Criteria: Fixed Guideway	Economic Development: 1 point per 1,000 new employees and 1 point per 500 new residents	Consensus	
3/30/2015		Public Transportation Criteria: Fixed Guideway	Congestion Relief: ((guideway passengers/day) x 290 days x 30 years x average time of trip x value of time)/$10,000,000	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Public Transportation Criteria: Fixed Guideway	Criteria Weights (Regional Impact): Mobility - 20%, Cost-Effectiveness - 15%, Economic Development - 20%, Congestion Relief - 15%	Consensus	
3/30/2015		Public Transportation Criteria: Fixed Guideway	Criteria Weights (Division Needs): Mobility - 15%, Cost-Effectiveness - 15%, Economic Development - 10%, Congestion Relief - 10%	Consensus	
3/30/2015		Safety Benefits	Only use as an additional benefit for the "Total Benefits over 10 years" element in the 'Benefit-Cost' criteria; do not include in safety criteria	Consensus	
3/30/2015		Safety	Continue using the P3.0 method of scoring	Consensus	
3/30/2015		NC Statewide Travel Demand Model	Use $12.75 for the auto-commute value of time	Consensus	
3/30/2015		NC Statewide Travel Demand Model	Consider use of statewide model for components of 'Benefit-Cost' and 'Economic Competitiveness' criteria only in P4.0; Decision on whether to use the model for these criteria has not yet been made	Consensus	
3/30/2015		Ferry Criteria	Asset Condition: 100 - Asset Condition Rating (provides the most points to the asset in the worst condition)	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Ferry Criteria	Benefits: Monetized values based on number of hours saved due to VMT reductions	Consensus	
3/30/2015		Ferry Criteria	Accessibility/Connectivity: The number of POI within 3 concentric rings of the route is determined, scaled by a multiplying factor (75% for Ring 1, 50% for Ring 2, 25% for Ring 3), and totaled	Consensus	
3/30/2015		Ferry Criteria	Asset Efficiency: 3-year maintenance cost / pro-rated 3-year replacement cost	Consensus	
3/30/2015		Ferry Criteria	Capacity/Congestion: Percentage of the number of vehicles left behind at each departure compared to the total number of vehicles loaded and carried by the route (in a year time frame)	Consensus	
3/30/2015		Ferry Criteria	Criteria Weights (Regional Impact): Asset Condition - 15%, Benefits - 10%, Accesibility/Connectivity - 10%, Asset Efficiency - 15%, Capacity/Congestion - 20%	Consensus	
3/30/2015		Ferry Criteria	Criteria Weights (Division Needs): Asset Condition - 15%, Benefits - 10%, Accesibility/Connectivity - 10%, Asset Efficiency - 15%	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
3/30/2015		Highway Weights: Statewide Mobility	Eliminate the following criteria from consideration: 'Pavement Condition', 'Shoulder Width', and 'Lane Width'	Consensus	
3/30/2015		Highway Weights: Regional Impact	Eliminate the following from consideration as a default criteria: 'Pavement Condition', 'Shoulder Width', and 'Lane Width'	Consensus	
3/30/2015		Highway Weights: Division Needs	Eliminate the following from consideration as a default criteria: 'Pavement Condition', 'Shoulder Width', and 'Lane Width'	Consensus	
4/13/2015	*Non-Highway Criteria; Highway Criteria Weights; Number of Projects and New Submittals; Local Input Points; Normalization*	Aviation Criteria	NCDOA Project Rating: Project rating from the NC Airports System Plan	Consensus	
4/13/2015		Aviation Criteria	FAA ACIP Rating: Rating from FAA Airport Capital Improvement Plan	Consensus	
4/13/2015		Aviation Criteria	Non-State Contribution Index: Project's Highway Trust funds / all other sources of project funding	Consensus	
4/13/2015		Aviation Criteria	Benefit/Cost: [(Total $ Econ. Contribution of Tier / Total # of IFR Ops of Tier) * NCDOA Capital Project Rating] / Project Cost	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
4/13/2015		Aviation Criteria	Criteria Weights (Statewide Mobility): NCDOA Project Rating - 40%, FAA ACIP Rating - 10%, Non-State Contribution Index - 30%, Benefit/Cost - 20%	Consensus	
4/13/2015		Aviation Criteria	Criteria Weights (Regional Impact): NCDOA Project Rating - 30%, FAA ACIP Rating - 5%, Non-State Contribution Index - 20%, Benefit/Cost - 15%	Consensus	
4/13/2015		Aviation Criteria	Criteria Weights (Division Needs): NCDOA Project Rating - 25%, FAA ACIP Rating - 10%, Non-State Contribution Index - 5%, Benefit/Cost - 10%	Consensus	
4/13/2015		Rail Criteria	Cost Effectiveness: (Return on Investment Index * 75%) + (Regional Job Creation Index * 25%)	Consensus	
4/13/2015		Rail Criteria	System Health: (Capacity Index * 75%) + (Accessibility/Connectivity Index * 25%)	Consensus	
4/13/2015		Rail Criteria	Safety and Suitability: Safety Index	Consensus	
4/13/2015		Rail Criteria	Project Support: Funding Leverage Index	Consensus	
4/13/2015		Rail Criteria	Criteria Weights (Statewide Mobility - Freight Rail only): Cost Effectiveness - 35%, System Health - 35%, Safety and	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
			Suitability - 20%, Project Support - 10%		
4/13/2015		Rail Criteria	Criteria Weights (Regional Impact): Cost Effectiveness - 25%, System Health - 20%, Safety and Suitability - 15%, Project Support - 10%	Consensus	
4/13/2015		Rail Criteria	Criteria Weights (Division Needs): Cost Effectiveness - 20%, System Health - 10%, Safety and Suitability - 10%, Project Support - 10%	Consensus	
4/13/2015		Highway Criteria Weights	Statewide Mobility: Benefit-Cost - 25%, Congestion - 30%, Economic Competitiveness - 10%, Safety 15%, Freight - 15%, Multimodal - 5%	Consensus	
4/13/2015		Highway Criteria Weights	Regional Impact: Benefit-Cost - 20%, Congestion - 20%, Accessibility/Connectivity - 10%, Safety - 10%, Freight - 10%	Consensus	
4/13/2015		Highway Criteria Weights	Division Needs: Benefit-Cost - 15%, Congestion - 15%, Accessibility/Connectivity - 5%, Safety - 10%, Freight - 5%	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
4/13/2015		Use of Alternate Criteria for Highway Projects	Each funding region and/or division may submit alternate criteria and/or percentage weights for use in evaluating highway projects at the Regional and/or Division level; requires unanimous support from all impacted MPOs, RPOs, and Division Engineers; submissions must be received by the SPOT office on or before new project submittal period begins in October 2015	Agreement	
4/13/2015		Scaling	Use P4.0 projects to set scale	Consensus	
5/4/2015	*Legislative and BOT Feedback; Normalization*	Public Transportation Criteria: Vehicle	Criteria Weights (Regional Impact): Access - 10%, Safety - 10%*, Impact - 20%, Cost-Effectiveness - 20%, Market Share - 10%*	Consensus Update	*Update to Consensus from 3/30/15
5/4/2015		Public Transportation Criteria: Vehicle	Criteria Weights (Division Needs): Access - 5%, Safety - 10%*, Impact - 15%, Cost-Effectiveness - 15%, Market Share - 5%*	Consensus Update	*Update to Consensus from 3/30/15
5/4/2015		Freight [+Military]	Add ferry terminals where the truck volumes exceed 10,000 to the list of eligible freight terminals	Consensus	
5/4/2015		Normalization	Continue with the same normalization approach in P4.0 as was used in P3.0	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
5/18/2015	*NC Statewide Travel Demand Model; Number of Projects and New Sumbittals; Local Input Points*	NC Statewide Travel Demand Model	Use statewide model for Statewide Mobility and Regional Impact categories (only for components of 'Benefit-Cost' and 'Economic Competitiveness', as stated in 3/30 consensus)	Consensus	
5/18/2015		Benefit-Cost / Economic Competitiveness / NC Statewide Travel Demand Model	Use similar methodology as in P3.0 to calculate components for Division Needs, using 10 year growth factors from statewide model	Consensus	
5/18/2015		Number of Projects in the Database (Highway)	Automatically keep in the database: Projects programmed for R/W or CON only in years 6-10 based on Final STIP, siblings of programmed projects, projects with a completed NEPA document, projects with project planning actively underway as of December 31, 2014, any project that received any amount of local input points in P3.0 (in either Regional Impact or Division Needs category)	Consensus	
5/18/2015		Number of Projects in the Database (Highway)	Any project not automatically retained in the database will be put in "holding tank" for use in resubmittals (SPOT ID and mapping retained, but data will need to be reprocessed)	Agreement	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
5/18/2015		Number of Projects in the Database (Non-Highway)	Non-highway modes will use same method as stated for Highways	Consensus	
5/18/2015		Number of Projects in the Database	Projects remaining in the database may be modified (with MPO/RPO and Division Engineer agreement) without counting against the total number of new submittals	Agreement	
5/18/2015		New Submittals (Highway)	Each MPO/RPO gets a minimum of 10 new project submittals + additional project submittals based on every 100K in pop, maximum of 20 (same method as P3.0); Each Division gets 7 new projects; '1 in, 1 out' is allowed as long as there is agreement between MPO/RPO and Division	Consensus	
5/18/2015		New Submittals (Non-Highway)	MPO/RPO and Division will have the same number of new submittals per mode as stated for Highway	Consensus	
5/18/2015		New Submittals	All new project submittals (all modes) must be made only by MPOs, RPOs, or Divisions	Agreement	
5/18/2015		Number of Local Input Points	Continue P3.0 process (# of points per area = 1000 points + additional 100 points per 50,000 population, with cap of 2,500 per area)	Consensus	

Date	Meeting Focus	Topic	Decision	Consensus/Vote	Notes
5/19/2015		Local Input Point Percentages	One MPO, one RPO, and one Chief Engineer representative will participate in the local input methodology internal review group as advisory members; this group will review MPO and RPO methodologies and provide approval, and will also review Division Engineers' methodologies and provide comments to the Chief Engineer (who will approve them)	Consensus	
5/20/2015		Local Input Point Percentages	Equal split between MPO/RPO and Division Engineer for local input percentages for the Regional Impact (15%/15%) and Division Needs (25%/25%) categories	Consensus	

Totals

- 102 Consensus Items
- 2 Consensus Updates
- 5 Agreement Items (the Workgroup agreed to these items, but consensus not required)
- 3 items n/a (neither agreement nor consensus required)

APPENDIX D – P4.0 PROJECT SUBMITTAL AND LOCAL INPUT POINT ALLOCATIONS

MPO/RPO Name	2013 Census Pop.	Population (Nearest 100,000)	Population (Nearest 50,000)	Maximum New Submittal	Local Input Points
Albemarle RPO	171,853	200,000	150,000	12	1,300
Burlington-Graham MPO	162,290	200,000	150,000	12	1,300
Cabarrus Rowan MPO	319,680	300,000	300,000	13	1,600
Cape Fear RPO	136,026	100,000	150,000	11	1,300
Capital Area MPO	1,105,002	1,100,000	1,100,000	20	2,500
Charlotte Regional TPO	1,296,029	1,300,000	1,300,000	20	2,500
Down East RPO	175,303	200,000	200,000	12	1,400
Durham-Chapel Hill-Carrboro MPO	408,415	400,000	400,000	14	1,800
East Carolina RPO	171,185	200,000	150,000	12	1,300
Fayetteville Area MPO	373,067	400,000	350,000	14	1,700
French Broad River MPO	397,330	400,000	400,000	14	1,800
Gaston-Cleveland-Lincoln MPO	382,310	400,000	400,000	14	1,800
Goldsboro Urban Area MPO	92,025	100,000	100,000	11	1,200
Grand Strand Trans. Study Area	37,066	0	50,000	10	1,100
Greater Hickory MPO	364,501	400,000	350,000	14	1,700
Greensboro Urban Area MPO	376,299	400,000	400,000	14	1,800
Greenville Urban Area MPO	130,792	100,000	150,000	11	1,300
High Country RPO	209,900	200,000	200,000	12	1,400
High Point Urban Area MPO	285,126	300,000	300,000	13	1,600
Isothermal RPO	132,747	100,000	150,000	11	1,300
Jacksonville Urban MPO	143,225	100,000	150,000	11	1,300
Kerr-Tar RPO	165,905	200,000	150,000	12	1,300
Land-of-Sky RPO	64,741	100,000	50,000	11	1,100
Lumber River RPO	226,554	200,000	250,000	12	1,500
Mid-Carolina RPO	186,524	200,000	200,000	12	1,400
Mid-East RPO	111,415	100,000	100,000	11	1,200
New Bern MPO	55,955	100,000	50,000	11	1,100
Northwest Piedmont RPO	172,656	200,000	150,000	12	1,300
Peanut Belt RPO	121,291	100,000	100,000	11	1,200
Piedmont Triad RPO	252,035	300,000	250,000	13	1,500
Rocky Mount Urban Area MPO	79,108	100,000	100,000	11	1,200
Rocky River RPO	106,311	100,000	100,000	11	1,200
Southwestern RPO	134,842	100,000	150,000	11	1,300
Triangle Area RPO	213,707	200,000	200,000	12	1,400
Upper Coastal Plain RPO	228,569	200,000	250,000	12	1,500
Wilmington Urban Area MPO	254,808	300,000	250,000	13	1,500
Winston Salem Urban Area MPO	406,788	400,000	400,000	14	1,800

Division	2013 Census Pop.	Population (Nearest 100,000)	Population (Nearest 50,000)	Maximum New Submittal	Local Input Points
01	262,307	300,000	250,000	7	1,500
02	493,267	500,000	500,000	7	2,000
03	672,930	700,000	650,000	7	2,300
04	583,672	600,000	600,000	7	2,200
05	1,430,323	1,400,000	1,450,000	7	2,500
06	668,091	700,000	650,000	7	2,300
07	900,291	900,000	900,000	7	2,500
08	514,372	500,000	500,000	7	2,000
09	744,298	700,000	750,000	7	2,500
10	1,422,458	1,400,000	1,400,000	7	2,500
11	370,833	400,000	350,000	7	1,700
12	735,110	700,000	750,000	7	2,500
13	498,777	500,000	500,000	7	2,000
14	354,651	400,000	350,000	7	1,700

Notes:

- MPOs/RPOs receive a minimum 10 new project submittals for each mode
- MPOs/RPOs receive an additional submittal per 100,000 people
- Maximum number of new project submittals is 20 for MPOs/RPOs
- Population is rounded to nearest 100,000 people to determine maximum # of new highway project submittals for each MPO/RPO

- All Areas receive a minimum of 1,000 points
- Areas receive an additional 100 points per 50,000 people
- Maximum number of local input points is 2,500
- Population is rounded to nearest 50,000 people to determine # of local input points for each MPO/RPO or Division
- Areas receive separate allocation of local input points for Regional Impact and Division Needs funding categories (amount of points is the same for each)

- MPO/RPO boundaries are be based on official 2015 boundaries.

APPENDIX E – P4.0 SCORING CRITERIA, MEASURES, AND WEIGHTS FOR ALL MODES

Highway Scoring

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Statewide Mobility	**Benefit/Cost = 25%** • Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT. **Congestion = 30%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway, weighted by the total traffic volume along the roadway. **Economic Competitiveness = 10%** • Measurement of the estimated number of long-term jobs and the % change in economic activity within the county that the project is expected to provide over 10 years. **Safety = 15%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Multimodal [+ Military] = 5%** • Measurement of congestion along routes that provide connections to multimodal passenger terminals. **Freight [+ Military] = 15%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Total = 100%**	--	--
Regional Impact	**Benefit/Cost = 20%** • Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT. **Congestion = 20%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway, weighted by the total traffic volume along the roadway. **Safety = 10%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Accessibility/Connectivity = 10%** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Freight [+ Military] = 10%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Total = 70%**	**15%**	**15%**

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Division Needs	**Benefit/Cost = 15%** • Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT. **Congestion = 15%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway. **Safety = 10%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Freight [+ Military] = 5%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Accessibility/Connectivity = 5 %** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Total = 50%**	**25%**	**25%**

Note: Region B and Divisions 2, 3, 6 have approved different criteria and weights for their respective areas – see end of Appendix E.

Aviation Scoring

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Statewide Mobility	**NCDOA Project Rating = 40%** • Assigns point values based on priority and need of the project. Projects are prioritized and classified within NC Division of Aviation (NCDOA) established project categories from the NC Airports System Plan. **FAA ACIP Rating = 10%** • Federal Aviation Administration (FAA) Airport Capital Improvement Plan (ACIP) Rating. Ratings based on critical airport development and capital needs within National Airspace System (NAS). **Non-State Contribution Index = 30%** • Measurement of the project's Highway Trust funds compared to all other sources of project funding. Provides greater points for projects with a higher % of non-Highway Trust funding sources (i.e. local, federal, other state grants, or public-private funds). **Benefit/Cost = 20%** • Measurement of the project's total economic contribution to the area. Includes the number of IFR (Instrument Flight Rules) operations, NCDOA project rating, and project cost. **Total = 100%**	--	--
Regional Impact	**NCDOA Project Rating = 30%** • Assigns point values based on priority and need of the project. Projects are prioritized and classified within NC Division of Aviation (NCDOA) established project categories from the NC Airports System Plan. **FAA ACIP Rating = 5%** • Federal Aviation Administration (FAA) Airport Capital Improvement Plan (ACIP) Rating. Ratings based on critical airport development and capital needs within National Airspace System (NAS). **Non-State Contribution Index = 20%** • Measurement of the project's Highway Trust funds compared to all other sources of project funding. Provides greater points for projects with a higher % of non-Highway Trust funding sources (i.e. local, federal, other state grants, or public-private funds). **Benefit/Cost = 15%** • Measurement of the project's total economic contribution to the area. Includes the number of IFR (Instrument Flight Rules) operations, NCDOA project rating, and project cost. **Total = 70%**	**15%**	**15%**
Division Needs	**NCDOA Project Rating = 25%** • Assigns point values based on priority and need of the project. Projects are prioritized and classified within NC Division of Aviation (NCDOA) established project categories from the NC Airports System Plan. **FAA ACIP Rating = 10%** • Federal Aviation Administration (FAA) Airport Capital Improvement Plan (ACIP) Rating. Ratings based on critical airport development and capital needs within National Airspace System (NAS). **Non-State Contribution Index = 5%** • Measurement of the project's Highway Trust funds compared to all other sources of project funding. Provides greater points for projects with a higher % of non-Highway Trust funding sources (i.e. local, federal, other state grants, or public-private funds). **Benefit/Cost = 10%** • Measurement of the project's total economic contribution to the area. Includes the number of IFR (Instrument Flight Rules) operations, NCDOA project rating, and project cost. **Total = 50%**	**25%**	**25%**

Bicycle & Pedestrian Scoring

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Division Needs	**Safety = 15%** • Measurement of number of bicycle and/or pedestrian crashes, speed limit, and safety benefits to determine adequacy of safety for users of the project. **Access = 10%** • Measurement of the quantity and significance of destinations associated with the project as well as the distance to the primary destination. Measures benefit to the community as a result of constructing the project. **Demand = 10%** • Measurement of the density of population and employment within a walkable or bike-able distance of the project. Measures user benefit as a result of constructing the project. **Connectivity = 10%** • Measurement of the degree of bike/ped separation from the roadway, ADA compliance, and connectivity to a similar or better project type. **Cost Effectiveness = 5%** • Measurement of combined user benefits of Safety, Access, Demand, and Connectivity criteria compared to the cost of the project to NCDOT. **Total = 50%**	**25%**	**25%**

Ferry Scoring

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Asset Condition = 15%** • Measurement of the condition rating of the asset. **Benefits = 10%** • Measurement of the project benefits based on the monetized value of the number of hours saved by utilizing the ferry route instead of taking the shortest alternative route. **Accessibility/Connectivity = 10%** • Measurement of the accessibility and connectivity provided by the route to jobs, services, and other points of interest. Measured by the number of points of interest within pre-determined circles of 10, 20, & 30 miles. **Asset Efficiency = 15%** • Measurement of the cost effectiveness of continued maintenance of the asset compared to replacement of the asset. **Capacity/Congestion = 20%** • Measurement of the number of vehicles left behind at each departure compared to the total number of vehicles loaded and carried by the route in a year. **Total = 70%**	**15%**	**15%**
Division Needs	**Asset Condition = 15%** • Measurement of the condition rating of the asset. **Benefits = 10%** • Measurement of the project benefits based on the monetized value of the number of hours saved by utilizing the ferry route instead of taking the shortest alternative route. **Accessibility/Connectivity = 10%** • Measurement of the accessibility and connectivity provided by the route to jobs, services, and other points of interest. Measured by the number of points of interest within pre-determined circles of 10, 20, & 30 miles. **Asset Efficiency = 15%** • Measurement of the cost effectiveness of continued maintenance of the asset compared to replacement of the asset. **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Vehicle)

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Access = 10%** • Measurement of the reported annual hours of operation compared to the number of vehicles in the fleet. **System Safety = 10%** • Measurement of the reported annual miles compared to the 3 year average of reported incidents. **Impact = 20%** • Measurement of the number of existing and projected annual passenger trips compared to the number of existing passenger trips. **Cost Effectiveness = 20%** • Measurement of the total projected passenger trips compared to the cost of the project to the state. **Market Share = 10%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Total = 70%**	**15%**	**15%**
Division Needs	**Access = 5%** • Measurement of the reported annual hours of operation compared to the number of vehicles in the fleet. **System Safety = 10%** • Measurement of the reported annual miles compared to the 3 year average of reported incidents. **Impact = 15%** • Measurement of the number of existing and projected annual passenger trips compared to the number of existing passenger trips. **Cost Effectiveness = 15%** • Measurement of the total projected passenger trips compared to the cost of the project to the state. **Market Share = 5%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Passenger Facility)

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Impact = 20% (Expansion projects only)** • Measurement of the number of existing and projected annual passenger trips compared to the number of existing passenger trips. **OR** **Age = 20% (Non-expansion projects)** • Age of the facility divided by 45 years (considered the useful life). **Cost Effectiveness = 20%** • Measurement of existing annual passenger trips compared to the cost of the project to the state. **Market Share = 15%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Ridership Growth = 15%** • Growth trend of ridership over the past 5 years. **Total = 70%**	**15%**	**15%**
Division Needs	**Impact = 15% (Expansion projects only)** • Measurement of the number of existing and projected annual passenger trips compared to the number of existing passenger trips. **OR** **Age = 15% (Non-expansion projects)** • Age of the facility divided by 45 years (considered the useful life). **Cost Effectiveness = 15%** • Measurement of existing annual passenger trips compared to the cost of the project to the state. **Market Share = 10%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Ridership Growth = 10%** • Growth trend of ridership over the past 5 years. **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Admin/Maintenance/Operations Facility)

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Impact = 20% (Expansion projects only)** • Measurement of the existing and additional capacity compared to the existing capacity. **OR** **Age = 20% (Non-expansion projects)** • Age of the facility divided by 45 years (considered the useful life). **Cost Effectiveness = 20%** • Measurement of existing annual passenger trips compared to the cost of the project to the state. **Market Share = 15%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Ridership Growth = 15%** • Growth trend of ridership over the past 5 years. **Total = 70%**	**15%**	**15%**
Division Needs	**Impact = 15% (Expansion projects only)** • Measurement of the existing and additional capacity compared to the existing capacity. **OR** **Age = 15% (Non-expansion projects)** • Age of the facility divided by 45 years (considered the useful life). **Cost Effectiveness = 15%** • Measurement of existing annual passenger trips compared to the cost of the project to the state. **Market Share = 10%** • Measurement of the number of existing and projected annual passenger trips compared to the population in the service area. **Ridership Growth = 10%** • Growth trend of ridership over the past 5 years. **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Fixed Guideway)

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Mobility = 20%** • Measurement of the projected annual trips. **Cost Effectiveness = 15%** • Measurement of the cost per trip over the life of the project. **Economic Development = 20%** • Measurement of the projected new employment and population growth in the fixed guideway corridor over 20 years. **Congestion Relief = 15%** • Measurement of the projected travel time savings to a passenger over 30 years. **Total = 70%**	**15%**	**15%**
Division Needs	**Mobility = 15%** • Measurement of the projected annual trips. **Cost Effectiveness = 15%** • Measurement of the cost per trip over the life of the project. **Economic Development = 10%** • Measurement of the projected new employment and population growth in the fixed guideway corridor over 20 years. **Congestion Relief = 10%** • Measurement of the projected travel time savings to a passenger over 30 years. **Total = 50%**	**25%**	**25%**

Rail Scoring

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Statewide Mobility (Class I Freight Only)	**Cost Effectiveness = 35%** • Measurement of monetized benefits compared to the project cost to NCDOT, and the jobs created for the region. **System Health = 35%** • Measurement of the volume to capacity ratio, and various measurements of accessibility and connectivity provided by the project via vicinity to points of interest, improvements to statewide rail networks, or employment density. **Safety and Suitability = 20%** • Measurement of potentially hazardous rail crossings. **Project Support = 10%** • Measurement of outside contributions to the project compared to the cost of the project to the state. **Total = 100%**	--	--
Regional Impact	**Cost Effectiveness = 25%** • Measurement of monetized benefits compared to the project cost to NCDOT, and the jobs created for the region. **System Health = 20%** • Measurement of the volume to capacity ratio, and various measurements of accessibility and connectivity provided by the project via vicinity to points of interest, improvements to statewide rail networks, or employment density. **Safety and Suitability = 15%** • Measurement of potentially hazardous rail crossings. **Project Support = 10%** • Measurement of outside contributions to the project compared to the cost of the project to the state. **Total = 70%**	**15%**	**15%**
Division Needs	**Cost Effectiveness = 20%** • Measurement of monetized benefits compared to the project cost to NCDOT, and the jobs created for the region. **System Health = 10%** • Measurement of the volume to capacity ratio, and various measurements of accessibility and connectivity provided by the project via vicinity to points of interest, improvements to statewide rail networks, or employment density. **Safety and Suitability = 10%** • Measurement of potentially hazardous rail crossings. **Project Support = 10%** • Measurement of outside contributions to the project compared to the cost of the project to the state. **Total = 50%**	**25%**	**25%**

Note: Passenger Rail only eligible for Regional Impact and Division Needs.

Highway Scoring - Alternate Criteria for Region B (Divisions 2 & 3)

Funding Category	Quantitative Data	Local Input	
		Division Input	MPO/RPO Input
Regional Impact	**Safety = 25%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Benefit/Cost = 10%** • Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT. **Congestion = 10%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway, weighted by the total traffic volume along the roadway. **Accessibility/Connectivity = 10%** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Freight [+ Military] = 10%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Multimodal [+ Military] = 5%** • Measurement of congestion along routes that provide connections to multimodal passenger terminals. **Total = 70%**	**15%**	**15%**

Highway Scoring - Alternate Criteria for Division 2

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**Safety = 20%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Congestion = 10%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway, weighted by the total traffic volume along the roadway. **Accessibility/Connectivity = 10%** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Multimodal [+ Military] = 5%** • Measurement of congestion along routes that provide connections to multimodal passenger terminals. **Freight [+ Military] = 5%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Total = 50%**	**25%**	**25%**

Highway Scoring - Alternate Criteria for Division 3

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**Safety = 15%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Congestion = 10%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway, weighted by the total traffic volume along the roadway. **Multimodal [+ Military] = 10%** • Measurement of congestion along routes that provide connections to multimodal passenger terminals. **Freight [+ Military] = 10%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Accessibility/Connectivity = 5%** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Total = 50%**	**25%**	**25%**

Highway Scoring - Alternate Criteria for Division 6

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	**Benefit/Cost = 15%** • Measurement of travel time savings and safety benefits the project is expected to provide over 10 years compared to the cost of the project to NCDOT. **Congestion = 10%** • Measurement of the Peak ADT traffic volume on the roadway compared to the existing capacity of the roadway. **Safety = 10%** • Measurement of the number, severity, and frequency of crashes along the roadway. **Freight [+ Military] = 10%** • Measurement of congestion along routes that provide connections to freight intermodal terminals and routes that have high truck volumes. **Accessibility/Connectivity = 5 %** • Measurement of county economic distress indicators and whether the project upgrades how the roadway functions. Goal of improving access to opportunity in rural and less-affluent areas and improving interconnectivity of the transportation network. **Total = 50%**	**25%**	**25%**